

Agricultural Economy



Dennis Shields

U.S. Crop & Livestock Markets Encounter Turbulence

The Year Behind & a Look Ahead

The tightest grain and oilseed supplies in several years are boosting prices and forcing adjustments for end-users this year. Drought-related problems have affected many regions of the country, slashing crop and forage production, stressing cattle operations, and raising costs for livestock and poultry producers. Growing conditions for crops, as well as for pasture and rangeland, were uneven across the country. Accordingly, there is wide variability in the economic impacts.

Falling crop production and sharp price increases are reviving at least a few memories of 1995/96, when strong demand and limited supplies led to record prices. The situation in 2002/03 is less extreme, but it is a striking departure from the fairly steady market conditions seen in recent years for grain and oilseeds, largely a result of benign weather in the U.S. and rest of the world. With the crop supply situation essentially established, markets are focusing on how buyers—both domestic and abroad—will adjust consumption patterns and how producers will change 2003 plantings in response to higher prices.

For the livestock sector, adjustments due to higher feed costs and tight forage supplies are resulting in abundant meat supplies, as producers incline more toward marketing than building herds. These large supplies will keep livestock and product prices relatively low for the next few months. As producers react to higher costs by slowing expansion plans or even reducing production, livestock and meat prices are expected to increase, and margins could swing from red to black.

U.S. Grains & Oilseeds: Tighter Supplies, Rising Prices

Production and supplies of the major field crops have dropped sharply in 2002, due largely to weather problems. The wheat harvest was the lowest since 1972, and corn and soybeans are expected to be the lowest since 1995 and 1999, respectively, although production estimates will not be finalized until January. Stocks of each crop will decline to very low levels, with use projected to show virtually no decline for corn and wheat, and with a modest contraction for soybeans. (Rice is a notable exception to the supply situation among major grains in 2002.)

Wheat prices have led the upward charge in recent months, and cash prices for some classes of hard wheat have crossed the \$5 threshold this fall. Wheat farm prices are forecast to climb to the highest level in 6 years, and corn and soybeans to the highest in 5. The ratio of global stocks to use for wheat and coarse grains is projected to be similar to the tight 1995/96 period. Yet prices are not expected to jump as high, assuming no more unforeseen demand or supply shocks.

Prices have been lower in recent years relative to historical patterns, consistent with a long-term downward trend. There are a number of likely factors, such as fewer stocks held by governments and thus more available to markets, buyers' tolerance of lower inventories to hold down costs, and better market information. Perhaps most critical to the 2002/03 price outlook is the existence of a significant volume of foreign exportable supplies for each major crop despite the overall tightness: wheat from Europe and the Black Sea region, corn from China, and soybeans from Argentina and Brazil. This global influence may keep a lid on the upward swing in U.S. prices.

At the same time that market conditions have shifted, the policy environment has also changed with the 2002 Farm Act. In contrast to the previous 4 years, there were no market loss assistance payments this fall. This will aggravate cash flow issues for many producers who had poor crops, although crop insurance coverage was widespread and should provide some minimal assistance. The new counter-cyclical payments will not kick in for wheat, corn, or soybeans, because prevailing prices are too high. Likewise, government payments from the commodity loan program (loan deficiency payments and marketing loan gains), continued under the new Act, will be small to nonexistent, given forecast prices.

Producers with normal or above-average crops will see strong gains in revenue, as increasing market receipts outweigh the decline in government payments. However, many producers had poor crops, and they will see market revenue plunge despite the higher prices, because they lack volume to sell.

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Wheat. Wheat has experienced the most pronounced tightening, as a smaller U.S. crop coincided with steep declines in Australia and Canada. These three countries account for the bulk of the world's high-quality wheat exports. For the U.S. and Canada, wheat output will be the lowest in 30 years, and for Australia, the lowest in nearly a decade. Overall, global supplies are not as tight, because of abundant but mostly lower quality wheat in Europe, India, and the "nontraditional" exporters, Russia, Ukraine, and Kazakstan.

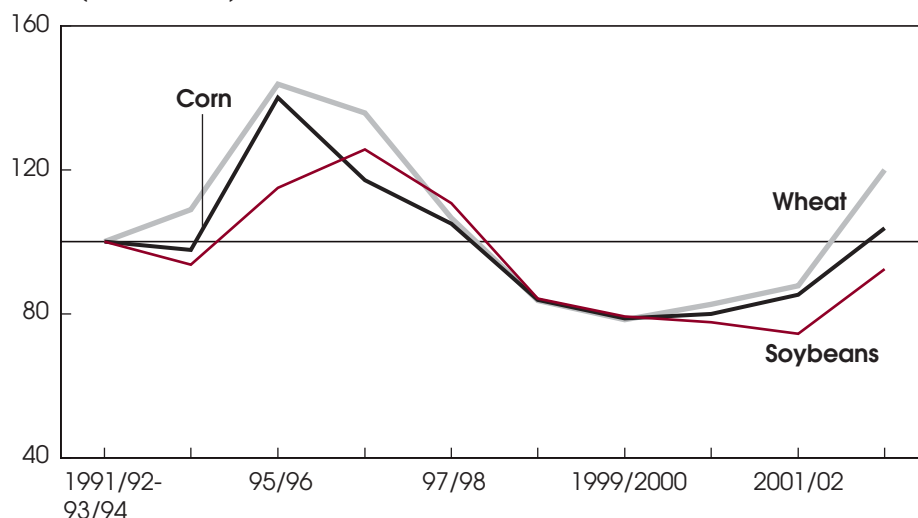
Wheat feeding to livestock is projected to be down 22 percent, accounting for virtually all of the reduction in wheat use in 2002/03. Food use should continue on track, and exports will likely be down slightly. End users in the U.S. and overseas will be forced to make major adjustments, such as blending different qualities of wheat and running down stocks, as they scramble for short supplies of milling quality wheat. Many end users of wheat have bought "hand to mouth" in recent years when markets were relatively sedate and the risk of a runup in prices appeared small.

U.S. and foreign users both will have difficulty buying wheat from Canada because of its severe shortfall. U.S. markets surged when Canada announced that it would not be able to take on new export commitments several weeks ago, and prices have similarly risen as forecasts of Australia's wheat crop have been cut. Limited supplies and higher prices are expected to prevent an increase in U.S. exports, but U.S. share of the world wheat market will increase.

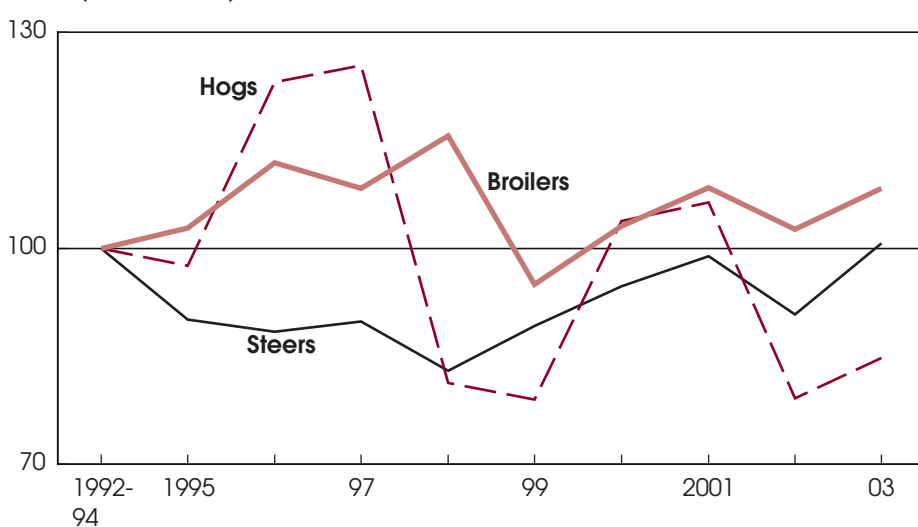
Corn. The drop in corn production was less pronounced than that of wheat. Average yields across the country are below trend, but with tremendous variability. Iowa and Minnesota producers generally had good to excellent crops, with yields forecast at record highs. In contrast, yields were down sharply in many areas of the eastern and western Corn Belt and Plains. Furthermore, there was likely a large increase in corn cut for silage because of pressing needs for livestock feed and because the grain yield would be so low. Yields in some fields were so low that they were probably abandoned, in some cases to collect insurance payoffs.

Farm Prices Turn Upward

Index (1992-94=100)



Index (1992-94=100)



Based on U.S. season-average farm or primary market prices. 2002/03, 2002, and 2003 forecasts. Economic Research Service, USDA

Although the overall supply shock was not that severe, there are indications that many users have had trouble procuring corn this fall, and cash markets have seen strength in some regions. Basis levels (the relationship between cash prices and futures) in some regions of the Corn Belt and Plains were unusually strong. After a sharp runup in late summer, futures prices for corn were fairly flat for most of the fall, reflecting improvements in the crop outlook and slow early-season exports.

For the year, how will the corn sector adjust? Total use is expected to remain high, close to the 2001/02 record (9.8 billion bushels). Gains in industrial use and exports are projected to offset a reduction in feed and residual use. As pressures increase on the livestock sector from higher costs and low product prices caused by large supplies, corn feed and residual is forecast to drop 3 percent. Ending stocks of corn are projected to fall by nearly half to a very low 848 bushels.

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Ethanol is the key driver in the robust demand outlook, despite higher prices. Corn used for ethanol is forecast to increase 15 percent in 2002/03, on top of a 14-percent rise last year, as the industry gears up for the upcoming switchover to ethanol in California. The nation's largest gasoline-consuming state has said it will be phasing out the fuel oxygenate MTBE, because it has polluted groundwater supplies. New ethanol plants are increasing capacity dramatically.

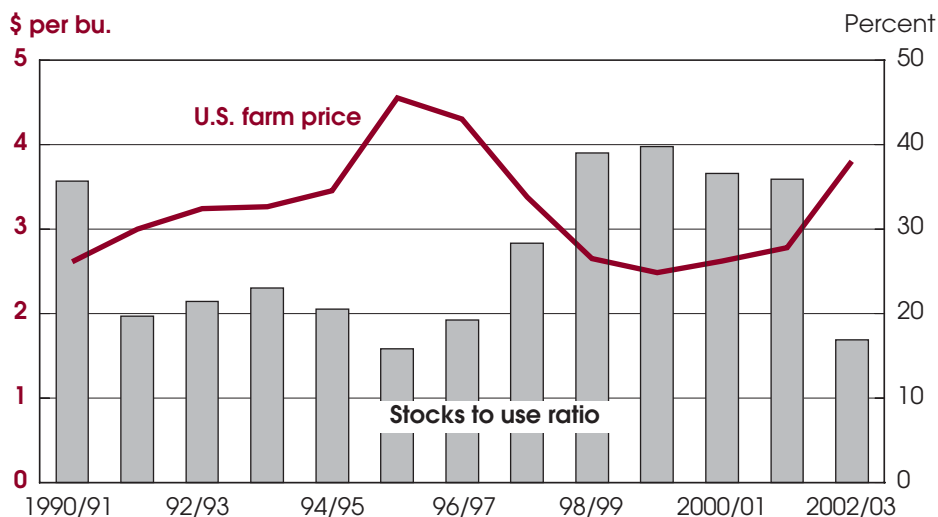
U.S. corn exports are projected to increase slightly, as exports from other countries shrink and world imports show little change. Importers have not indicated any large-scale reaction to rising U.S. prices. Because the supply of corn from competing exports will be down, U.S. market share should increase modestly. Exports from Argentina, Brazil and Eastern Europe will fall because of smaller supplies. However, China, with an excellent crop and large stocks, is exporting fairly aggressively, stimulated by higher prices. China is expected to overtake Argentina as the largest foreign exporter this year.

Soybeans. The fall in the soybean crop will be less dramatic than wheat, and like corn, shows strong variations within growing areas. Many states saw lower yields, but yields were record high in a few states (e.g., Minnesota). Beginning stocks of soybeans were low to start the year, so the reduction in 2002/03 supply will be slightly larger than the drop in production would indicate.

Demand prospects are somewhat more clouded than for wheat and corn, because of some signs of softening demand for soybean meal. An expected reduction in the hog inventory in the next few months and an unusual production slowdown for the poultry sector will limit growth in domestic soybean meal use. Meal exports are projected to decline significantly because of greater competition from South America.

A bright spot in the soybean complex is oil, as a tighter global vegetable oil situation has boosted prices. On balance, the amount of soybeans crushed (for meal and oil) is expected to fall slightly from its record pace of the previous year as crush margins fall. The industry will face soy-

Wheat Prices Have Increased As Stocks Tighten



2002/03 forecasts.
Economic Research Service, USDA

bean prices that are forecast to jump 24 percent, while prices for meal, the principal product, rise only 1 percent.

The international arena presents many uncertainties. On the demand side, soybean imports by China, the world's fastest growing market, are projected to increase to a record 14 million metric tons. However, concerns have emerged about shifting policies on imports of genetically modified soybeans—which constitute the bulk of world trade. Recent import gains by the European Union, the world's largest importer of soybeans and soybean meal, are expected to flatten because of increased feeding of wheat, which has higher protein than other feedgrains.

The biggest story is the specter of enormous production gains continuing in South America, presenting more competition for the U.S. In both Argentina and Brazil, economic and financial problems and weakening currency values against the dollar are reinforcing soybean's dominance. Soybeans are cheaper to produce than corn, the main competing crop, and they are less dependent on imported inputs. A sixth consecutive record crop is forecast for Argentina in 2002, and a fourth for Brazil. Steep depreciation of their currencies also enhances Brazil and Argentina's exports of soybeans and prod-

ucts. It is not clear if the newly elected government in Brazil will embark on any policies such as differential export taxes that affect the mix of soybean versus product exports.

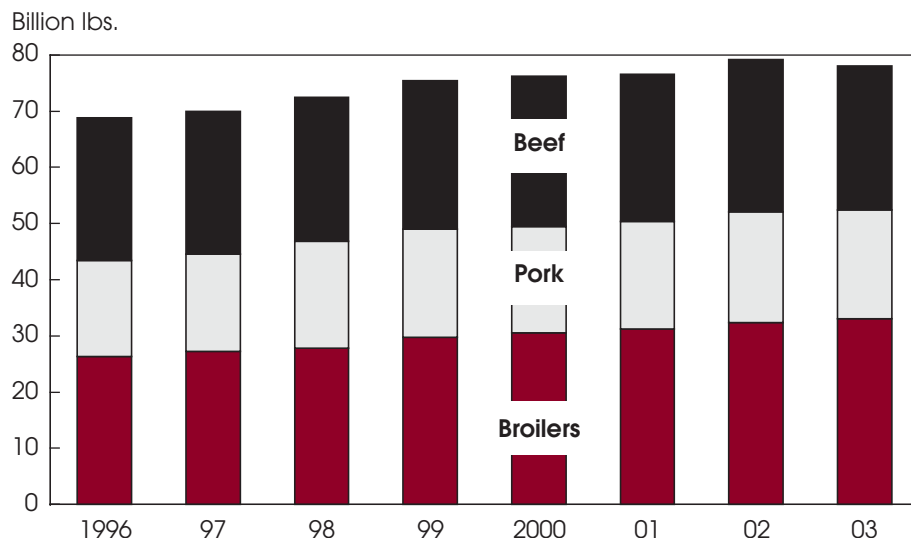
How Long Will High Crop Prices Persist?

Crop prices are expected to continue rising for the next several months as they come off harvest lows and rise seasonally. However, when markets are this tight, the seasonal pattern is not easy to predict. How much higher they move will depend on how well end-users are covered, what substitutes are available, and the strength of import demand. Crop prospects for the 2003 crops—both here and abroad—will also affect when prices peak and how fast they fall.

U.S. farmers responded to the stimulus of record prices in 1996 by increasing acreage dramatically. For the eight major field crops (wheat, corn, sorghum, barley, oats, soybeans, cotton, and rice), plantings went up 15 million acres or 6 percent. It is doubtful that the response will be as large in 2003, because price signals are not as extreme and there are questions about how much land is available. Nevertheless, a healthy increase is likely.

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Beef and Pork Production to Decline in 2003



2002/03 forecasts.

Economic Research Service, USDA

Another issue is how the crop mix will play out, with tradeoffs among crops. Early expectations are for a drop in soybeans as wheat and corn acres rise based on current market signals. Changes in loan rates under the 2002 Farm Act would reinforce these expectations. The rate for soybeans declined 26 cents per bushel while rates for wheat and corn rose 22 and 9 cents, respectively.

Winter wheat plantings for 2003 harvest will be up sharply. Incentives include higher prices, wheat's relatively low production costs, and improved moisture conditions in much of the Southern Plains. An increase is also in store in the Midwest, mid-South, and Southeast, but excessive moisture may limit the rise. In the Southern Plains, many producers normally use winter wheat for grazing, and incentives are particularly strong this year because of tighter feed and forage supplies. Although corn prices are also up, limited irrigation water in the Western Plains may also lead many producers to turn back to wheat, which requires less water.

Meat Supplies To Moderate in 2003

While U.S. markets for many crops headed higher this year, livestock and meat prices have been under pressure from simultaneous peaks in supplies of beef, pork, and poultry. Cold storage stocks of red meat and poultry at the end of September were 30 percent above a year earlier. As meat and poultry supplies mount, a sharp increase in feed costs is challenging producers of all animal proteins in turning a profit this year.

Record pork production this fall results from a large March-May pig crop and higher imports of feeder pigs. Beef production may hit a record this year as carcass weights continue their long-term growth and as drought and poor pasture conditions in many parts of the U.S. forced continued liquidation of the cattle herd. For poultry, large production is coinciding with a substantial drop in export demand.

For consumers, plentiful supplies have translated into supermarket specials with attractive prices. For much of 2002, retail beef prices have been below year-earlier levels (which were affected by poor feeding conditions and smaller supplies), and the growth in retail prices for all meat and

poultry is only one-third the level of overall food price inflation. Overall, U.S. consumers have a strong appetite for meat and poultry, with per capita consumption forecast at a record 219 pounds (retail basis) in 2002.

The current supply situation has highlighted the growing importance of foreign demand for meat. Between 1992 and 2002, export volume as a share of total use rose from 5 percent to 8 percent for beef, from 2 percent to 8 percent for pork, and from 7 percent to 16 percent for broilers. During this period, global economic growth and reductions in trade barriers, primarily in East Asia and Mexico, have spurred growth in exports.

With exports accounting for a growing portion of the long-term growth in meat production, market participants see export-related issues take on added importance—any change in foreign demand is felt quickly in U.S. livestock and meat markets. In 2002, disease and food safety issues disrupted poultry exports, for example. As for overall export demand, sluggish world economic growth and the strong U.S. currency value this year have limited export growth and producer returns.

U.S. per capita meat and poultry consumption continues its long-term upward trend, fueled by growth in broiler consumption (beef and pork have been relatively flat for the last 10 years). But gains in per capita poultry consumption since the early 1990s have been much lower than in previous years, except for years when exports declined, suggesting a maturing of market demand for poultry products. It does not appear that this year's well-publicized meat recalls related to food safety have adversely affected U.S. demand for meat.

While the market works through large meat supplies, near-term prospects for a downturn in total meat production appear more likely than at any time in the recent past. Producers, particularly in the hog and poultry sectors, are responding to higher feed costs and several months of low market returns by paring back production plans. In the absence of an unforeseen drop in demand, livestock and product prices are expected to turn up in

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Farm Household Income Fares Better Than Farm Business

Substantially weaker markets for livestock and dairy products in 2002 have had a dramatic impact on U.S. net farm income, which is forecast at \$36.2 billion, down about \$10 billion from last year and from the 10-year average. The forecast includes direct government payments of \$17 billion, down 18 percent from the last year. With higher crop prices, payments associated with the loan deficiency program will decline. The first forecasts for farm income in 2003 will be published in January.

Farm households derive more than 90 percent of their earnings, on average, from off-farm sources, which significantly dampens the impact of farm-sector performance on the economic well-being of farm households. Despite a dramatic drop in farm-sector income in 2002, farm households will see their income decline just 1 percent, on average, to \$63,237 per household. Off-farm income is currently hampered by continued slow recovery of the general economy and slow wage growth.

Commercial family farms (147,000 households with farm sales of at least \$250,000) will realize the largest declines in household income, at 18 percent. Household income on these farms averages more than \$100,000. Commercial family farm households derive about 30 percent of their income from off-farm sources.

2003 after languishing for most of this year.

Cattle. Attractive calf prices in recent years have created an annual expectation in the industry that cow-calf operators, assuming normal weather and good forage-growing conditions, would soon begin to retain heifers and expand their herds. But poor forage conditions during the last several years in major cow-calf producing states have resulted in a steady liquidation. The level of cow slaughter and numbers of heifers in feedlots continued at levels that dampened prospects for a rebuilding phase in the national cow herd and for the sharply lower beef supplies that would accompany the process. Record slaughter weights also have contributed to record beef production and put downward pressure on cattle prices for more than a year.

Market prospects appear to be changing, though. Cattle placements in feedlots were down from year-earlier levels in September and October, which signals reduced slaughter levels in 2003. Beef production is forecast down 5 percent in calendar year 2003, although with high slaughter weights preventing a further decline. Fed-cattle prices broke through year-earlier levels in late October, and the seasonal price rally is stronger than in recent years. Prospects for higher cattle prices next year depend to a large extent

on "normal" forage and grazing conditions in spring and summer, which would encourage producers to retain animals for breeding rather than feeding them for slaughter.

Demand for beef is relatively strong. In 2002, the market has seen large volumes of meat pass through domestic and export channels at prices that are above expected levels based on historical relationships. Domestic demand appears to have bounced back from a drop in the last quarter of 2001 (related to reduced travel, restaurant sales, and business spending). Similarly, beef exports this year have exceeded early forecasts, with strong shipments to Korea and Mexico. With some improvement in global economic growth, additional gains are expected in 2003.

Hogs. A few months ago, hog market prospects for the fourth quarter appeared to be almost as grim as in 1998—very low prices and significant financial losses, especially for producers who sold on the spot (cash) market. Rather than face a repeated crisis, producers began making adjustments this summer. In anticipation of higher feed costs and lower hog prices in the fall, sow slaughter increased, helping drop the U.S. breeding herd to 2 percent below a year earlier on September 1. Producers also intend to reduce farrowings in the next 6 months, which will

result in 2 percent lower pork supplies and higher hog prices in 2003.

Two other supply factors related to market and industry structure will also moderate pork supplies next year. First, U.S. imports of Canadian hogs, after increasing nearly tenfold in 10 years, are expected to remain unchanged in 2003. Given poor hog market conditions and high feed costs this year, the Canadian industry is shifting from dramatic growth to more stable inventory levels. Second, growth in the average number of pigs per litter (and pig crops per year), after advancing throughout the 1990s, has halted as the structural shift to larger, more efficient hog operations has been mostly completed.

Pork exports are expected to continue rising next year. General economic gains in the three most important markets—Japan, Mexico, and Canada—will likely enhance U.S. shipments. However, the U.S. faces increasing competition from Canada in the Mexican and Japanese markets, and from the European Union (especially Denmark) and Brazil in other markets.

Broilers. Export difficulties broadsided the poultry industry in 2002. Much lower prices have accompanied large meat and poultry supplies and the drop in export demand. As a result, U.S. per capita consumption of boiler meat is forecast to rise to a record high at nearly 80 pounds (retail weight) after remaining steady at 76-77 pounds since 1999. Whole-bird and leg meat prices in third-quarter 2002 were down 8 and 31 percent, respectively, from a year earlier.

The most publicized factor in this year's 12-percent drop in broiler exports is a major slowdown in shipments to Russia, the largest U.S. market. A trade dispute between the two countries emerged earlier this year involving localized outbreaks of avian influenza, sanitary regulations and reporting requirements. It was eventually resolved in August. Other countries such as Japan, Korea, and Mexico have also imposed restrictions on U.S. poultry products at some point during 2002 due to localized disease outbreaks.

Higher feed costs, uncertain export demand, and lower product prices are affecting the poultry industry. From mid-

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September to early November, the number of broiler-type eggs going into incubators was down 3 percent from a year earlier. Broilers from these eggs will come to market around early December, slowing growth in fourth-quarter broiler production. Broiler production grew 5 percent per year between 1980 and 2000, but has since slowed. Growth in production is forecast at 2 percent in 2003.

Volatile Markets Ahead?

Prospects for a rebound in grain and oilseed production in 2003 will be the key factor driving prices next spring. However, even if the outlook for production gains are favorable, the price path may be bumpy and the timing of price drops uncertain. Low stocks make the markets more skittish and magnify the reaction to weather events or other news. Consequently, buyers and sellers face more price risk.

One of the first indicators of next year's crop supply prospects will be the *Winter Wheat Seedings* report in January. Then, in early spring, USDA will report farmers' planting intentions for all the major crops. But the main focus of markets in the next few months will be consumption, with reports on indicators such as grain stocks, export sales, soybean crush, and livestock inventories also taking on added importance as the market deals with reduced supplies and higher prices.

Exports head the list of demand-side uncertainties for the crop and livestock sectors. Recovery from the world economic slowdown of 2001 continues to be anemic, and the dollar remains strong against the currencies of many important importers and competing exporters. Also, as poultry marketers can attest, world markets for meat and poultry are highly sensitive to animal disease outbreaks and government policies, creating major market opportunities or precipitating declines in export demand, depending upon the level of trade in affected countries and how competing suppliers respond.

For the livestock complex, prospects entering 2003 are for a general upturn in prices as total red meat and poultry production declines for the first time in 21 years. Due to lower returns in 2002, the broiler industry is slowing its growth, and the hog sector is essentially set for lower pork production. Domestic and export demand prospects appear good, although declining U.S. consumer confidence and lower manufacturing activity raise questions about the strength of the U.S. economy and demand for meat.

The perennial challenge in forecasting beef production has been pinpointing when producers will begin retaining heifers for herd expansion. When enough producers see favorable pasture and range conditions and have sufficient forage supplies, the number of cattle for slaughter could drop sharply given the already reduced inventory and as producers retain females for breeding. A strong runup in cattle prices would likely ensue. If total meat production fails to slow as much as expected next year, though, livestock and meat prices will face some downside price risk.

The potential for market volatility may be greatest in the soybean market, where a record South American soybean crop is already factored into current price levels. Any weather problems in Argentina or Brazil could lead to skyrocketing prices, with grain markets likely following. But assuming normal weather next year, higher acreage and improved yields in the U.S. should replenish grain and oilseed supplies and dampen prices. **AO**

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December Releases—National Agricultural Statistics Service

The following reports are issued electronically at 3 p.m. (ET) unless otherwise indicated.

www.ers.usda.gov/nass/pubs/pubs.htm

December

- 3** Weather - Crop Summary (noon)
- 4** Broiler Hatchery
Dairy Products
Egg Products
- 5** Dairy Products Prices (8:30 a.m.)
Milkfat Prices (8:30 a.m.)
Poultry Slaughter
- 11** Cotton Ginnings (8:30 a.m.)
Crop Production (8:30 a.m.)
Weather - Crop Summary (noon)
- 11** Broiler Hatchery
- 13** Dairy Products Prices (8:30 a.m.)
Potato Stocks
Turkey Hatchery
- 16** Milk Production
- 17** Weather - Crop Summary (noon)
- 18** Broiler Hatchery
- 19** National Hop Report (noon)
- 20** Dairy Products Prices (8:30 a.m.)
Milkfat Prices (8:30 a.m.)
Cattle on Feed
Cold Storage
Livestock Slaughter
- 23** Cotton Ginnings (8:30 a.m.)
Catfish Processing
Chickens and Eggs
Monthly Agnews
- 24** Weather - Crop Summary (noon)
- 27** Dairy Products Prices (8:30 a.m.)
Broiler Hatchery
Peanut Stocks and Processing
- 30** Quarterly Hog and Pigs
- 31** Weather - Crop Summary (noon)
Agricultural Prices